

REMARKS/ARGUMENTS

Applicants would like to thank the Examiner for the consideration given the present application. The application has been carefully reviewed in light of the Office action, and amended as necessary to more clearly and particularly describe and claim the subject matter which applicants regard as the invention.

Claims 1–30 remain in this application. The Examiner has allowed claims 3–10, 13–19, 29 and 30. Claims 23, 24, 26 and 27 were objected to for being dependent upon a rejected base claim, but allowable if put into independent form. The applicant has amended the parent claims rather than putting these objected claims into independent format.

Claims 1 and 11 were rejected under 35 U.S.C. §102(a) as being anticipated by Kudou (U.S. 6,337,976). Claims 2 and 12 were rejected under 35 U.S.C. §102(a) as being anticipated by Liu (U.S. 6,496,545). Claims 20–22 and 25 were rejected under 35 U.S.C. §103(a) as being unpatentable over Kudou. For the following reasons, the rejections are respectfully traversed.

Claims 1 and 2 have been amended to recite that “said local oscillation signal is provided to another of said pair of first quadrature mixers with a phase shifted or not shifted without regard to said band switching signal.” Claim 21 has been amended to recite a “phase shifting means for shifting a phase of said local oscillation signal for input to one of said pair of first quadrature mixers without regard to said band switching signal.” It is clear from the references that the prior art does not teach the cited limitations of the claims.

With regard to Kudou, the Examiner argues that variable phase shifters 11 and 12 are adjustable via switches SW1 and SW2. Figs. 1 and 7 show that phase shifter 11 is used to shift an oscillating frequency input to mixer 3, and phase shifter 12 is used to shift an oscillating frequency input to mixer 4. But the reference clearly teaches that “the switching operations of the switches SW1 and SW2 are simultaneously carried out by the user of the selection signal S29” (col. 8, lines 56–58). Thus, both oscillating

signals into the mixers 3/4 are adjusted by the signal S29. In contrast, the claim clearly recites that the oscillation input to one of the mixers must be "without regard to said band switching signal." There is no teaching in the references of such a feature. Thus, claims 1, 2 and 21 are patentable over Kudou.

Similarly, Liu does not teach the cited claim elements. Switch 32 is cited by the Examiner as being used to change the phase of a signal input to a pair of mixers 16/18. But again, it is clear that the operation of the switch changes the phase into *both* of the mixers (that is the function of a cross switch, which causes the inputs/outputs to crossover, and thus *both* outputs change when the switch is thrown, e.g. col. 5, lines 12–21). Accordingly, claims 1, 2 and 21 are patentable over Liu as well.

Claim 11 has been amended to provide the step of "providing said local oscillation signal, with said phase shifted or not shifted without regard to said band switching signal, to a second quadrature mixer, also for converting either the reception signal or the reception intermediate frequency signal into a reception baseband signal." Claim 12 has been amended to provide the step of "providing said local oscillation signal, with said phase shifted or not shifted without regard to said band switching signal, to a first quadrature mixer."

For the reasons discussed above, the references do not teach providing a mixer with a signal without regard to the band switching signal. Thus, claims 11 and 12 are also patentable over the references.

Claim 22 recites a "phase shifting means for inputting said band switching signal for shifting a phase of said local oscillation signal to ensure consistent polarities of quadrature components of said reception baseband signal irrespective of an operating band of the apparatus."

The Examiner admits that the prior art does not teach this element of the claim (see page 8 of the Office Action, second full paragraph). The prior art reference(s) must teach or suggest *all* of the claim elements and/or claim limitations (MPEP §2143.03).

The Examiner has failed to show any teaching of maintaining consistent polarities. Thus, claim 22 is patentable over the references.

Furthermore, the Examiner argues that it would be obvious to modify the reference as suggested because it would ensure correct polarities. This is clearly a case of improper *hindsight reasoning*, because the Examiner must rely on the application itself for any suggestion of ensuring correct polarities. The Examiner must show that there is some *suggestion* or *motivation* to modify the reference (MPEP §2143.01). The mere fact that references can be modified, alone, is not sufficient to establish prima facie obviousness (*Id.*). The prior art must also suggest the *desirability* of the combination (*Id.*). The fact that the claimed invention is within the capabilities of one of ordinary skill in the art is also not sufficient, by itself, to establish prima facie obviousness (*Id.*). Merely listing an advantage of the combination is also not sufficient, as some rationale for combining the references must be found in the references themselves, or drawn from a convincing line of reasoning based on established scientific principles practiced by one skilled in the art that some advantage or beneficial result would be produced by the combination (MPEP §2144). Such motivation cannot be found in the application itself, as such hindsight is impermissible; the facts must be gleaned from the prior art. (MPEP §2142, last paragraph). Thus, the rejection of claim 22 is improper.

Finally, the remaining rejected claims depend on one or more of the above claims, and thus are patentable over the references for at least the same reasons as the parent claim(s).

In consideration of the foregoing analysis, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the Examiner is encouraged to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

Appln. No. 09/535,303
Amdt. Dated September 28, 2005
Reply to Office Action of July 12, 2005

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No. 32430.

Respectfully submitted,
PEARNE & GORDON LLP

By: 

Robert F. Bodi – Reg. No. 48,540

1801 East 9th Street
Suite 1200
Cleveland, Ohio 44114-3108
(216) 579-1700

Date: September 28, 2005